

Douglas W. Darnowski

Professor of Biology, Indiana University Southeast, New Albany, Indiana, USA (I use my home address and email for contract work.)

Textbook Work:

Smart Edition Media 2018

Created one lesson (photosynthesis) for an online AP course, including practice test

Wisewire 2018

Created one lesson and several end-of-unit exams for an online AP course

Jones and Bartlett 2017-present

Assessment writing, editing, tagging for textbooks on leadership in nursing, sports management, emergency medicine, advanced emergency medicine; 4000+ questions

Springer 2017

Wrote instructor manual for textbook on the psychology of aging

Wrote instructor manual for textbook on middle range theories of nursing

Seton 2017

Chapter on hearing for a Grade 6 Biology textbook

Pearson 2014-present

5 Majors Biology textbooks, 1 Non-majors Biology textbook, 1 Upper Level Biology textbook

Authoring (writing new or revising) 3000+ questions for in-class rapid response, majority at Bloom's Level of 3 or above

Authoring 1200+ questions for online practice tests

Areas: Organismal Diversity, Plant Growth and Diversity, Developmental Biology, Evolution, Ecology, Cell Biology, Molecular Biology, Biochemistry, Genetics

McGraw Hill 2013-2015

6 Non-majors Biology Textbooks

Authoring (writing new or revising) 5000+ questions for online test banks, 25%+ at Bloom's 3 or 4

Tagging of questions in most projects

Sinauer 2012-2014

2 Majors Biology textbooks

Authoring (writing new or revising) 2000+ questions for test bank and online quizzes, as well as in-class rapid response, including many at Bloom's Level 3-5

Areas: Organismal Diversity, Plant Growth and Diversity, Developmental Biology, Evolution, Ecology, Cell Biology, Molecular Biology, Biochemistry

Popular Audience:

Triggerplants, book published by Rosenberg Pty Ltd, New South Wales, Australia

Freelance Editing of Scientific Papers for Peer Review:

For various European colleagues (Polish, Czech, French) copyediting and correction for usage and style. 1998-present.

Book Reviews:

Over 50 for *Plant Science Bulletin* (Botanical Society of America)

Teaching:

**Indiana University Southeast,*

07/08-present, Associate Professor of Biology

08/03-present, Assistant Professor of Biology

Associate Member of the Graduate Faculty

-Courses (most with laboratory): Introduction to Biological Sciences I and II; General Biology/Problem Based I; Plant Growth and Development; Plant Physiology; Horticultural Plants: Biotechnology, Physiology, and Development; Survey of Modern Molecular Development; Introduction to Plant Biology; Developmental Plant Physiology; First Year Seminar; Senior Seminar; Independent Study; Picturing Biology Honors Seminar; Introduction to Biology for Non-Majors

**Washington College, 08/99-08/03, Assistant Professor of Biology*

-Courses (most with labs): General Biology I and II; Cell Biology; Diversity of Plants; Developmental Biology; Summer Research; Senior Seminar

**University of Illinois, 10/96-6/99, Postdoctoral Research Associate, Crop Sciences: tissue culture, genetic transformation, protein analysis, electron microscopy, plant cultivation,*

Education:

**Cornell University 08/92-09/96*

Ph. D., January 1997, Field of Plant Biology

National Science Foundation Predoctoral Fellow

Plant Science Center Fellow

Teaching Assistant, Electron Microscopy Courses, '94-'95

**Yale University 08/88-05/92*

B. S., June 1992, Biology with Distinction in the Major, Magna

Cum Laude, National Merit Scholar, Phi Beta Kappa

Douglas W. Darnowski

Associate Professor of Biology
Department of Biology, LF318

Work

✳️ *Indiana University Southeast* (*courses with intensive writing; #courses with problem-based or project-based learning)

07/08-present, Associate Professor of Biology

08/03-present, Assistant Professor of Biology

-Associate Member of the Graduate Faculty

-Courses Taught: *@#L346 Survey of Modern Molecular Development; *L100* Introduction to Biology for Non-Majors; *L101* Introduction to Biological Sciences 1; *L102* Introduction to Biological Sciences 2; *L111* Introduction to Biological Sciences Diversity, Evolution, and Ecology (online-only); *@B373 Plant Growth and Development; @B370 Plant Physiology with laboratory; *#B375 Horticultural Plants: Biotechnology (face-to-face and online-only), Physiology, and Development; *#B101 Introduction to Plant Biology; *@#B576 Developmental Plant Physiology, all with labs; *S104* First Year Seminar; *L403* Senior Seminar; *@#L490 Independent Study; **H400* Picturing Biology Honors Seminar

✳️ *Washington College*, 08/99-08/03, Assistant Professor of Biology

-Courses Taught: Biology 111 General Biology I; Biology 112 General Biology II; *@Biology 205 Cell Biology; *Biology 212 Diversity of Plants; *@Biology 302 Developmental Biology; all with labs; @Biology 395 Summer Research; Biology 000 Senior Seminar

-Featured in *Washington College Alumni Magazine* in article in series "Tales of Great Teaching"

✳️ *University of Illinois*, 10/96-6/99, Postdoctoral Research Associate

Education:

✳️ *Cornell University*

Thesis: Biochemistry and Immunolocalization of Profilin in Tomato Pollen
Ph. D., January 1997, Field of Plant Biology, concentrations in Biochemistry, Cell Biology, Molecular Biology

National Science Foundation Predoctoral Fellow
 Plant Science Center Fellow
 Teaching Assistant, Electron Microscopy Courses, '94-'95

✿ *Yale University*

B. S., June 1992, Biology with Distinction in the Major,
 Magna Cum Laude, National Merit Scholar, Phi Beta Kappa

Awards and Honor Societies:

- ✿ Distinguished Research and Creativity Award (Junior Faculty), Indiana University Southeast, 09/06
- ✿ Alumni Achievement Award, Christian Heritage School, 10/03
- ✿ Sigma Xi, elected 2000
 - Secretary, Washington College Chapter, 03/01-03/02
 - President Elect, Washington College Chapter, 03/02-08/03
 - Acting President, Washington College Chapter, 08/02-01/03 (Chapter won 2 national awards)
- ✿ Phi Beta Kappa, elected 1991

Grants, Scholarships, and Fellowships:

- ✿ Indiana University Southeast *Grant-In-Aid of Research* with Prof. Crum (Art) for work on multicolor cyanotype photochemistry, \$1000, 03/2017
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for work on carnivorous seaweeds, \$1000, 03/2017
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for further work on carnivorous seaweeds, \$1000, 10/2016
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for work on carnivorous seaweeds, \$1000, 03/2016
- ✿ Indiana University Southeast *Quick Response Mini-Grant* for nature printing during carnivorous seaweed project, \$100, 03/2016
- ✿ Indiana University Southeast *Strategic Online Grant* to make B375 Horticultural Plants lecture and lab into an online-only course at IUS, \$3500, 10/2015
- ✿ Indiana University Southeast *Quick Response Mini-Grant* for nature printing and emulsion transfers, \$100, 03/2015
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for studies on possible carnivorous seaweeds, \$1000, 03/2015
- ✿ Indiana University Southeast *Quick Response Mini-Grant* for nature printing and emulsion transfers, \$100, 03/2015
- ✿ Indiana University Southeast *Strategic Online Grant* to make add L111 (IUBloomington General Biology I lecture) into an online-only course at IUS, \$3500, 10/2014
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for studies on possible dryland pitcherplants, \$1000, 03/2014
- ✿ Indiana University Southeast *Student Assistant Grant*, \$1000, 04/2008
- ✿ Indiana University Southeast *Grant-In-Aid of Research* for a Sunbow Lamp, \$770, 04/2008

- ✱ Ohaus *Case Study Winner*, \$2200 four-place digital balance, 02/2008
- ✱ Indiana University Southeast *Large Grant Program* for short term metabolomics exchange, \$5000, 12/2006
- ✱ Indiana University Southeast *Large Grant Program* for short term metabolomics exchange, \$5000, 04/2006
- ✱ Indiana University Southeast *Large Grant Program* (with David Taylor and John Doyle) for purchase of a transmission electron microscope, \$5000, 04/2006
- ✱ Indiana University *Overseas Conference Fund*, \$700 for travel to IBC2005 in Vienna, Austria, 2005
- ✱ Indiana University Southeast *Office of International Programs*, \$200 for research on triggerplants with Dr. Laurent Legendre, 2005
- ✱ Indiana University *Institute for Advanced Study Fellowship* for Dr. Laurent Legendre to come to IU Southeast for collaboration 07+08/05, \$7500, 2004
- ✱ Indiana University *Research Support Fund*, \$12,000, 2004
- ✱ Indiana University *Intercampus Research Fund* (with Maxine Watson of Indiana University Bloomington), \$6800, 2004
- ✱ Indiana University Southeast *Summer Faculty Fellowship*, \$8000, 2005
- ✱ Indiana University Southeast *Office of International Programs*, \$500 for research on triggerplants, 2004
- ✱ Indiana University Southeast *Office of International Programs*, \$100 for the 2006 ICPS meeting, 2004
- ✱ Indiana University, *Center for the Study of Global Change Travel Grant*, \$440, 2004
- ✱ Indiana University, *Intercampus Travel Grant*, \$200, 2004
- ✱ Indiana University Southeast, School of Natural Sciences, *McCullough Grants*, 2003-2004, 2004-2005 \$675, \$1500
- ✱ Indiana University Southeast, *Student Assistant Grants*, 2003-04, \$1685 and \$750; 2006 \$956.25; 2006 \$1000
- ✱ International Waterlily and Watergardening Society *Grant for the Study of Prey Preference in Utricularia*, 2003-04, \$700
- ✱ Washington College *Faculty Enhancement Funds*, 1999 Fall, 2000 Fall, 2001 Fall, 2002 Spring, 2002 Fall, averaged ~\$1000 per funded proposal
- ✱ Washington College *Faculty Travel Award* 1999 Fall, 2000 Fall, 2001 Fall, 2002 Spring, 2002 Fall, \$700 per funded application
- ✱ Friends of Miller Library *Supplemental Book Funds* 1999, 2001, 2002
- ✱ Position on the *Mellon Grant to Washington College* (use of new technologies in classroom teaching) 1999-2000, ~\$5000
- ✱ Leadership role in Washington College's 2001 application for *funding by NCUR* for summer undergraduate research
- ✱ *National Science Foundation Predoctoral Fellowship* ~\$14- 15,000/year for three years plus tuition up to \$6500 (additional tuition paid by Cornell)
- ✱ *Cornell Graduate School Travel Awards* 1994, 1995, ~\$500 each
- ✱ Wrote three quarters of a *USDA NRI grant* for thesis advisor. Grant funded on first submission, ~\$50,000 per year for two years (1994/95-1995/96)
- ✱ Sigma Xi *Grant-In-Aid of Research*, 1995, \$500
- ✱ Cornell Summer 1995 *Graduate School Half Fellowship*, ~\$3000
- ✱ *National Merit Scholar* 1988-89 \$2000

Seminars and Other Public Talks

- ✿ July 2012, Columbus, OH, USA; Botanical Society of America, “Prey Preference of Aquatic Bladderworts” and “Teasels” An Unrecognized Midwestern Carnivore?”
- ✿ July, 2011, St Louis, MO, USA; Botanical Society of America, “Prey Preference of Aquatic Bladderworts Across a Wide Geographical Range”
- ✿ May, 2010, Columbus, OH, USA; Ohio Carnivorous Plant Society, “Prey Preference of Aquatic Bladderworts Across a Wide Geographic Range”
- ✿ May, 2010, “Cultivating Carnivorous Plants,” Sunnyside Master Gardeners
- ✿ March, 2010, “Cultivating Carnivorous Plants,” Southern Indiana Botanical Society
- ✿ “Triggerplants as Previously Unrecognized Carnivorous Plants,” BSA/ASPB Meeting (see below), July 2007
- ✿ “Production of Tubers from Detached Leaves of *Drosera peltata*,” SIVB Meeting (see below), June 2007
- ✿ “Where You Ought to Be,” on research program, IUS School of Natural Sciences Board of Advisors, January 2007
- ✿ “Experimental Ecology of Aquatic Carnivorous Plants,” June 2006, 6th Conference of the International Carnivorous Plant Society, Frostburg, Maryland, USA
- ✿ “Triggerplants (*Stylidium* spp.; Stylidiaceae): 300+ New Carnivores,” June 2006, 6th Conference of the International Carnivorous Plant Society, Frostburg, Maryland, USA
- ✿ “Crocodile Hunter, Schmockodile Hunter: Cool Plants from Australia.” November 2005, Indiana University Southeast Library
- ✿ “Native Carnivorous Plants of the Delmarva.” April 2003, Adkins Arboretum, Caroline County, MD
- ✿ “Triggerplants: New Carnivores.” February 2003, Meadowview Biological Research Station, Woodford, VA
- ✿ “Carnivorous Plants and Triggerplants of Australia.” October 2002, Heron Point, Chestertown, MD
- ✿ “Protein Sorting in Several Plants Directed by a Novel Signal Peptide.” May 1999, University of Illinois at Urban-Champaign
- ✿ “Profilin Distribution in Tomato.” August 1996, Cornell University

Books and Peer-Reviewed Publications

Published Book:

- ✿ Darnowski DW (2002) *Triggerplants*, Rosenberg Publishers, Pty. Ltd., Dural, New South Wales, Australia.

Published Papers and Chapters:

- ✿ Legendre L, Darnowski DW (2017) Biotechnology with carnivorous plants. Achievements, possibilities, and limitations of growing CPs in tissue culture; genetic transformations; CPs as sources of secondary metabolites. In *Carnivorous Plants: Physiology, Ecology, and Evolution*, Oxford University Press. In press.
- ✿ Darnowski DW, Bauer U, Horner J, Mendez M, Plachno B (2017) Prey selection and specialization by carnivorous plants. In *Carnivorous Plants: Physiology, Ecology, and Evolution*, Oxford University Press. In press.
- ✿ Moberly SP, Watson M, Darnowski DW (2017) Many triggerplants (*Stylidium* spp.;

- Stylidiaceae) form arbuscular mycorrhizal associations. *Journal of the International Carnivorous Plant Society*. 46: 23-27.
- ✿Darnowski DW (2016) The Search for All of the Victims and All of the Killers. *Journal of the International Carnivorous Plant Society* 45: 140-143.
 - ✿Darnowski DW (2016) Further Evidence of Carnivory in Triggerplants (*Stylidium*; Stylidiaceae). *Journal of the International Carnivorous Plant Society*. 46:28-29.
 - ✿Darnowski, DW (2016) Attraction of Preferred Prey by Carnivorous Plants in *Biocommunication*, In: *Biocommunication: Sign-Mediated Interactions Between Cells and Organisms*. pp. 309-325. Eds: J. Sechbach and R. Gordon. World Scientific Press, London.
 - ✿Santiago Y, Darnowski DW (2012) Many carnivorous plants are capable of forming mycorrhizae. *Journal of the International Carnivorous Plant Society* 41: 4-7
 - ✿Darnowski DW, Fritz S (2010) Prey preference in corkscrew plants (*Genlisea* sp.). *Journal of the International Carnivorous Plant Society* 39: 114-116.
 - ✿Darnowski DW, Koerber A, Moberly S, Darnowski DW (2007) Prey preference in two aquatic bladderworts. *Journal of the International Carnivorous Plant Society* 36: 57-61.
 - ✿Darnowski DW, Carroll DM, Plachno B, Klebanoff E, Cinnamon E (2006) Protocarnivory in Triggerplants Is Timed to Flowering. *Plant Biology* 8: 805-812.
 - ✿Darnowski DW, Celano MA, Moberly S, Lalor CD (2005) Vegetative reproduction during development in Australian pygmy and tuberous sundews. *Acta Botanica Gallica* 152: 147-157
 - ✿Saha S, Darnowski DW (2005) Effects of Cu and Fe on the growth of *Utricularia gibba* and *U. macrorhiza*. *Journal of the International Carnivorous Plant Society* 34: 41-46.
 - ✿Darnowski DW (2004) How to grow a ridiculously large number of sundews. *Journal of the International Carnivorous Plant Society* 33:90-94.
 - ✿Darnowski DW (2003) Triggerplants (*Stylidium* spp.; Stylidiaceae) a new floral and horticultural crop with preliminary analysis of hardiness. *Acta Horticulturae* 624: 93-101
 - ✿McDermott M, Darnowski DW (2002) Ecology of bladderworts in a unique site on the Eastern Shore of Maryland. *Journal of the International Carnivorous Plant Society*, 31: 67-74.
 - ✿Chadwick ZD, Darnowski DW (2002) Observations on the associations of crustaceans and protists with actively growing *Aldrovanda vesiculosa*. Proceedings of the 4th International Carnivorous Plant Conference, Laboratory of Plant Chromosome and Gene Stock, Hiroshima University, Hiroshima, Japan.
 - ✿Darnowski DW, Vodkin LO (2002) A soybean lectin-GFP fusion labels the vacuoles in developing *Arabidopsis thaliana* embryos. *Plant Cell Reports*, 20:1033-1038.
 - ✿Philip RP, Darnowski DW, Maughan PJ, Vodkin LO (2001) Processing and localization of bovine β -casein expressed in transgenic soybean seeds under control of a soybean lectin expression cassette. *Plant Science*. 161: 323-335.
 - ✿Darnowski DW, Vodkin LO (1998) Construction of a device composed of common plumbing supplies for freezing microscopy samples. *Biotechniques*. 24: 412-413.
 - ✿Philip R, Darnowski DW, Sundararaman V, Cho M-J, Vodkin, LO (1998) Localization of β -glucuronidase in protein bodies of transgenic tobacco seed by fusion of an amino terminal sequence of the soybean lectin gene. *Plant Science*. 137:191-204.

✱Darnowski, D., Valenta, R, Parthasarathy MV (1995.) Identification and distribution of profilin in tomato (*Lycopersicon esculentum* Mill.). *Planta* 198: 158-161.

In Preparation

- ✱Darnowski DW (2017) Comparison of peat- and coir-based potting media on the growth of triggerplants. In preparation.
- ✱Tate A, Way B, Darnowski DW (2017) Formation of tubers *de novo* on detached leaves of *Drosera peltata* in tissue culture. In preparation.
- ✱Darnowski DW, Shafer C, Ho W (2017) Prey preference in carnivorous bladderworts over a wide geographic range and time. In preparation.

Teaching Publications

- ✱ *Instructor Manual for Introduction to the Psychology of Aging* from Jones and Bartlett
- ✱ 50% coauthor of chapter on hearing and hearing aids for 7th *Grade Science*, Seton Home Education, May 2017
- ✱ Darnowski, DW (2014) coauthor of *Test File* (accompanies *Principles of Life*) Sinauer, Sunderland, MA, USA; about 1000 questions
- ✱ Darnowski, DW (2013) coauthor of *Test File* (accompanies *Life: The Science of Biology*) Sinauer, Sunderland, MA, USA; about 1000 questions
- ✱ Clicker questions (rapid student response tool) for 4 majors textbooks for Pearson, about 1000 questions in total
- ✱ Various other question writing projects for Sinauer, McGraw-Hill, Pearson, Jones and Bartlett, Springer for majors and non-majors introductory Biology books, Psychology books, and Nursing books, mostly for online quizzes or clicker questions; about 12 projects and 6,000 additional questions authored as well as 2 instructor manuals to accompany textbooks, 2014-present
- ✱ Darnowski, DW (2006) Nature printing in the college biology classroom, *Nature Printing Society Newsletter* 24: 4-5.
- ✱Darnowski DW (2006) Carnivorous plants in and around your watergarden. *Journal of Watergardeners International*, v. 1, issue 23. (online journal)

Scientific Research: (non-peer reviewed publications and presentations noted in this section to show student benefit and project follow-through)

Indiana University Southeast

Seaweed project; with Evin Magner, '16. Building on my lab's work looking for other unrecognized carnivorous plants, we have begun the search for carnivorous plants in the oceans.

-Investigation of Possible Drylad Pitcherplants from mid-North America; with Cory Schaefer '14. Studying whether several genera of local and regional plants which form water-trapping leaf bases are carnivorous pitcherplants, with an emphasis on possible symbiotic connections for digestion.

-Presentation at Botany 2012, Columbus, OH, USA

-Prey Preference Across Time and Geography; with Cory Schaefer '14, Winnie Ho Ph.D. student IUB, Meghan Whyte '14, Alice Barthold '15. Derivation of PPI, a new unitless measure of what carnivorous plants prefer to consume from among available prey, and its application to carnivorous bladderworts across a range of months and geographic locations.

-Darnowski DW, Shafer C, Ho W (2014) Prey preference in carnivorous bladderworts over a wide geographic range and time. In preparation.

-Development of Traps in Two Aquatic Carnivorous Plants:

Bladderworts (*Utricularia*; Lentibulariaceae) and Waterwheel Plants (*Aldrovanda*; Droseraceae); with Andrew Koerber '04; Nicole Nassar '07, Alan Huth '08. Studying how these traps develop in particular whether the type of prey available affects size and morphology of traps. Also, molecular controls of trap development.

- Formed international research group with Dr. Lubomir Adamec of the Czech Academy of Sciences and Dr. Laurent Legendre of the Université de St. Étienne, Lyon (France) on mineral nutrition in carnivorous plants. This group will make use of the metabolomics facility at the University of Louisville.

-Darnowski DW (2006) Carnivorous plants in and around your watergarden. *Journal of Watergardeners International*, v. 1, issue 23

-Darnowski DW (2004) Observations on the *Aldrovanda*-containing and *Aldrovanda*-lacking areas of Girraween Lagoon, Australia. *Carnivorous Plant Newsletter* 33: 80-82.

-Vegetative Reproduction in Australian Pygmy and Tuberous Sundews (*Drosera*; Droseraceae); with Scot Sandage '05; Alan Tate '07; Steven Moberly '07; Craig Lalor '04; Robert Cating '04; Elizabeth Block '07, Brooks Way '09, Allison Ho '09, Tate Lieber '10.

Collaboration with Dr. Kingsley Dixon and Dr. Eric Bunn of King's Park Botanical Garden, Perth, Australia. Studying the production of gemmae and tubers from both classical/hormonal and molecular perspectives.

-Darnowski DW (2004) Vegetative reproduction in Australian sundews, oral presentation, 2004 Congress of the International Carnivorous Plant Society, Lyon, France (highlighted in the 2004 IUS Annual Report)

-Lalor CD, Darnowski DW (2004) Leaf-tuber development in Australian sundews induced by cytokinin. Poster at the NCUR National Meeting, Indianapolis, IN

-Tate A, Moberly SJ (2005) Vegetative propagules in Australian *Drosera*: Physiology and Molecular Biology. IUURC Conference poster, 02/05, and IUS Student Research Conference Poster, 04/05

-Block E, Way B (2007) Propagation of *Drosera peltata in vitro*. IUS Student Research Conference Poster, 04/07

-Poster, Powerpoint presentation at IUS Life Sciences Week, 2005.

-Developmental Timing of Carnivory in Triggerplants (*Stylidium*; Stylidiaceae) Steven Moberly '07, Emily Cinnamon '05, Jonathon Watkins '09, Brooks Way '10, Alan Huth '10. Studying the unique developmental timing of carnivory in triggerplants—how is this

controlled and why is carnivory timed for just before flowers open. Collaboration with Dr. John Cairney and Liz Kabanoff, University of Western Sydney, Australia, and with Dr. Maxine Watson, Indiana University Bloomington.

-Poster at 2007 Indiana University Undergraduate Research Conference by Steven Moberly, Brooks Way, Alan Huth.

✿ *Washington College*

-Propagation of Carnivorous Plants and Triggerplants

-Rapid *in vitro* propagation of Australian pygmy *Drosera*. With Megan McMahon '01, Briana Neal '02, Shauna Bolden, '03, Sarah Lind '03.

-Smoke-enhanced seed germination. With Allison Weisbrod '02, Leora Ramiro '03, Christie Allebach '03, Vanessa Makarewicz '02, Pat Horley '06.

-Tuberization in Australian and South African sundews.

-Sarah Lind, '03. Poster presentation at Washington College's 2000 Summer Research Institute.

-Bolden S, Foy K, McDermott M, McMahon M, Ramiro L, Weisbrod A, Darnowski DW. 2000. Several basic and applied projects on carnivorous plants. 2000 Meeting of the International Carnivorous Plant Society.

-Biochemistry/Physiology of Carnivorous Plants and Triggerplants

-Toxic and other effects of various metals on the growth of pygmy and tuberous sundews *in vitro* and *in vivo*; With Melissa Celano, '02. -Poster presentation at Washington College's 2000 Summer Research Institute.

-Assessment of possible carnivory among triggerplants and other plants; With Deborah Carroll '01, Alice Waggoner '02, Christina Lee '05, Theresa Donohue '06, Matthew Stielper '03, Jonathon Watkins '08, Emily Cinnamon '05.

-Carroll D, Darnowski DW (2001) A biochemical exploration of the possibility of carnivory in triggerplants. 12th Annual St. Joseph's University Sigma Xi Student Research Symposium.

-Darnowski DW, Carroll DM, Stielper MJ (2002) Are triggerplants (*Stylidium*; Stylidiaceae) carnivorous? Poster at the 4th International Carnivorous Plant Conference, Tokyo, Japan.

-Improved field assay for carnivorous plants. With Matthew McDermott '03.

-Ecology of local bladderworts (*Utricularia* spp.; Lentibulariaceae). With Matthew McDermott '03; Sunipa Saha '03. Poster presentations at Washington College's 2000 and 2001 Summer Research Institutes. 2 peer reviewed papers published.

-McDermott M, Darnowski, DW (2001) Analysis of growth requirements of locally rare bladderworts (*Utricularia* spp.; Lentibulariaceae). Botany 2001, poster.

-Prey preferences of Waterwheel plants (*Aldrovanda vesiculosa*; Droseraceae) and Corkscrew plants (*Genlisea* spp.; Lentibulariaceae). With Zachary Chadwick '02, Nana Afari-Armah '05, Sarah Fritz '06

-Protein biochemistry of carnivorous plants. With Kelly Foy '00

-Novel electrophoretic devices for fine-scale protein analysis. With Matthew McDermott '03.

-Horticultural Value of Carnivorous Plants and Triggerplants

- Darnowski DW (2002) A method for growing Aldrovanda. *Carnivorous Plant Newsletter* 31: 113-115
- McDermott M, Darnowski DW (2001) A New Pot Design for Tuberos Drosera. *Carnivorous Plant Newsletter* 30:90-91
- Darnowski DW (2000) A little bit of Oz in Maryland. *Bulletin of the Australian Carnivorous Plant Society*. September, pp. 3-5.
- Darnowski DW (2002) Some non-carnivorous plants useful for locating *Drosera* species in northern WA and the NT. *Bulletin of the Australian Carnivorous Plant Society*. September, p. 4.
- Darnowski DW (2002) Triggerplants (*Stylidium* spp.; Stylidiaceae) a new floral and horticultural crop with preliminary analysis of hardiness. Poster and discussion at the International Horticultural Congress, Toronto, Canada
- Darnowski DW (2002) Trip #5, 50,000 km to home. *Bulletin of the Australian Carnivorous Plant Society*. September, pp. 10-11.
- Initiated sharing of cultures and discussion of collaboration on triggerplants (*Stylidium* spp.; Stylidiaceae) with Dr. Jon Lindstrom of the University of Arkansas, Dr. Terri Starman of Texas A&M University, Dr. Brian Corr of Ball Seed.
- Comparison of two methods of preparing specimens for herbarium sheets. With Vjekoslav Tomaic, '01.
- Tomaic V, Darnowski DW (2001) A comparison of conventional and microwave pressing of plant materials by following preservation of pigments. 12th Annual St. Joseph's University Sigma Xi Student Research Symposium.
- Three color cyanotype photochemistry. With Corey Smith, '06.
- Smith C, Darnowski DW (2003) Three color cyanotype photochemistry for teaching Biology. 14th Annual St. Joseph's University Sigma Xi Student Research Symposium.
- Stereochemically inappropriate amino acids and their effects on plant growth and development. With Matthew Stielper, '03.
- Stielper MJ, Darnowski DW (2003) Effects on plant tissue cultures of stereochemically inappropriate amino acids. 14th Annual St. Joseph's University Sigma Xi Student Research Symposium.

- ✿ *University of Illinois* (with Dr. L. O. Vodkin except as noted)
 - Electron Microscopic Immunolocalization of Transgenic of β -GUS in Tobacco and of Transgenic Casein in Soybean.
 - Philip R, Darnowski DW, Maughan PJ, Vodkin LO (2001) Localization and processing of bovine β -casein in transgenic soybean seeds. *Plant Biology 2000*, Meeting of the American Society of Plant Physiologists.
 - DNA Construction, Transformation, and Complete Transgenic Analysis for Vacuole-Specific Green Fluorescent Protein Expression in *Arabidopsis thaliana*.
 - Transformation of Soybean by *Agrobacterium*-Mediated Means and by Biolistic Means.
 - Regeneration of *Spathoglottis* (with Dr. P. S. Jayakumar)

- ✿ *Cornell University*
 - Research Rotation: Root and Stem Tissue Culture, with Dr. E. D. Earle
 - Darnowski DW, Earle ED (194)*In Vitro Cell. Dev. Bio. Animal.* 30A(3 part 2): 77.
 - Rotation: Tomato Transformation and Enzyme Biochemistry, with Dr. J. Steffens

-Rotation: Legume DNA Sequencing, with Dr. J. J. Doyle

-Thesis Project: The Actin-Binding Protein Profilin in Tomato Pollen Growth and Development, with Dr. M. V. Parthasarathy

-Darnowski DW, Parthasarathy MV (1995)*Molecular and Cellular Biology*. 5(S): 1576; 6(S): 797.

✿ *Yale University*

Stem Growth Physiology and Electrophysiology, with Dr. M. H. M. Goldsmith

Publicity

✿ Featured in IUS pages in *Louisville Magazine* (10/2016) "Faces of Higher Education Issue"

✿ Main scientific source for article by Mary Saner in *Delmarva Quarterly* on Blair's Pond (DE) magazine

✿ Subject of Ohaus case study for work on carnivorous plants using Ohaus balances

✿ Research mentioned in "Carnivorous Plants Ravenous Residents of the Eastern Shore" in July, 2004 *TidewaterTimes*

✿ Research featured in *Chesapeake Life* magazine, 02/03 issue

✿ Research featured in November 21, 2002 *Delaware News Journal* Home and Garden Section

✿ Interviewed on Australian radio about triggerplants and carnivorous plants 07/02: ABC Kimberley, ABC; Southwest, Radio 2CC Canberra

✿ Research with students featured in full-page "Hungry to Teach," *Chronicle of Higher Education*, 02/22/02, p. A40

✿ Research featured in "Making botanical progress" in the 05/03/01 *Baltimore Sun*

✿ Quoted in "Let these plants swat the bugs for you" in the 05/01/01 *Christian Science Monitor*

✿ Research featured on *Voice of America*, 6/2001

✿ Research featured by Southeast Environmental Network (radio), 11/2001

Meetings Attended

2012: Botany 2012, Columbus, OH, USA

*Organizer of Colloquium on Advances in Carnivorous Plant Research

2011: Botany 2011, St. Louis, MO, USA

2010: Rivers Institute Conference, Louisville, KY, USA

2007: Society for *In Vitro* Biology, Indianapolis, IN, USA

*Comoderator for Micropropagation Session

Botanical Society of America/American Society for Plant

Biology Joint Meeting, Chicago, IL, USA

2006: International Carnivorous Plant Society, Frostburg, MD, USA

*Co-organizer for conference

Intercollegiate Studies Institute National Leadership

Conference, Indianapolis, IN, USA

2005: International Botanical Congress, Vienna, Austria

First Louisville Metabolomics Symposium, Louisville, KY, USA

- 2004: International Carnivorous Plant Society, Lyon, France
- 2003: 13th Annual St. Joseph's University Sigma Xi Student Research Symposium, Philadelphia, PA, USA
- 2002: International Carnivorous Plant Society, Tokyo, Japan
International Horticultural Congress, Toronto, Canada
- 2001: 12th Annual St. Joseph's University Sigma Xi Student Research Symposium, Philadelphia, PA, USA
Botany 2001, Albuquerque, NM, USA
- 2000: International Carnivorous Plant Society, San Francisco, CA, USA
Educational Publishing Institute, Shippensburg State University, PA, USA
- 1998: Microscopy and Microanalysis, Atlanta, GA, USA
- 1997: Society for In Vitro Biology, San Francisco, CA, USA
- 1996: Crown Gall Conference, Urbana, IL, USA
- 1995: Plant and Fungal Cytoskeleton Gordon Conference, New Hampshire, USA
American Society for Cell Biology, Washington, DC, USA
- 1994: Tissue Culture Association (now Society for In Vitro Biology), Research Triangle Park, NC, USA
American Society for Cell Biology, San Francisco, CA, USA

Writing and Related Experience

- ✿ *Triggerplants*, only the second book ever on plants of the genus *Stylidium*, published in May 2002 by Rosenberg Publishers, Pty. Ltd., Dural, New South Wales, Australia, for the publication of a new book, *Triggerplants*, including approximately 100 of the author's photographs, drawings, and paintings.
- ✿ Reviewed over 50 introductory biology textbook chapters for Sinauer, W.H. Freeman, McGraw Hill, Pearson
- ✿ Writing over 9,000 questions for textbooks published by Sinauer, McGraw-Hill, and Pearson
- ✿ Editorial Committee, *Plant Science Bulletin*, Botanical Society of America, 08/01-07/07
- ✿ Literature Reviews Editor for *Carnivorous Plant Newsletter*, 03/07-present
- ✿ Reviewed chapter on carnivorous plants for Hans Lambers, of the University of Western Australia, for a new professional-level book on plant physiology
- ✿ Book Reviews for the Bulletin of the Botanical Society of America (www.botany.org; follow links to Plant Science Bulletin):

- The Gardener's Guide to Growing Irises*
The Gardener's Guide to Growing Penstemons
Essential Oil Crops
The Gardener's Guide to Growing Fritillaries
The Gardener's Guide to Growing Peonies
The Gardener's Guide to Growing Clematis
Cyclamen
Growing Bulbs the Complete Practical Guide
A Guide to the Species Irises
Succulents A Practical Gardening Guide
Vireyas A Practical Gardening Guide
Carnations and Pinks for the Garden and Greenhouse
Dirr's Hardy Trees and Shrubs
Vandas Their Botany, History, and Cultivation
Shakespeare's Flowers
Hollies: the Genus Ilex
Laughter on the Stairs
Campanulas A Gardener's Guide to Their Use and Cultivation
The Gardener's Guide to Growing Camellias
The Illustrated Encyclopedia of Camellias
The Gardener's Guide to Growing Daylilies
Japanese Flowering Cherries
Tropical Fruits
Herbs in Bloom: A Guide to Growing Herbs as Ornamental Plants
Penstemons
Myxomycetes a Handbook of the Slime Molds
Seed Germination A Guide to the Early Stages
The Photo Atlas of Vascular
- Plants CD-ROM*
Plant Tissue Culture Techniques and Experiments, Second Edition
Australia 300 Years of Botanical Illustration
Wildflowers of the Fairest Cape
Aroids: Plants of the Arum Family
The Cactus Family
Mistletoes
Plant Cell Biology, Second Edition
Flammable Australia
The Catalog of the 10th International Exhibition of Botanical Art and Illustration
Cacti: Biology and Uses
Narcissus and Daffodil: The Genus Narcissus
Portraits of Himalayan Flowers
The Botanical Language (CD)
Plant Growth and Development Hormones and Environment
Thyme, The Genus Thymus
The Names of Plants, Third Edition
A Color Handbook of Biological Control in Plant Protection
Natural Growth Inhibitors and Phytohormones in Plants and Environment
Pulmonarias and the Borage Family
Folklore and Symbolism of Flowers, Plants and Trees
The Interactive Manual and Photo-Library of Woody Landscape Plants (DVD Version)
Botanical Watercolors from the National Herbarium
- Nederland*
 Octavo Edition of *American Medical Botany* by Joseph Bigelow
Blueberries, Cranberries, and Other Vacciniums
Tree Ferns
 Octavo Edition of *Choix des Plus Belles Fleurs* by P. J. Redouté
The Catalog of the 11th International Exhibition of Botanical Art & Illustration Creative Propagation, 2nd ed.
Waterlilies and Lotus: Species, Cultivars and New Hybrids
Chia
Drosera (Droseraceae), Flora Neotropica Monograph 86
Biology of Floral Scent
The Fusarium Laboratory Manual
Cultivating Carnivorous Plants
Pitcher Plants of the Americas
Rare Amazing Things
100 Years of Change in the Distribution of Common Indiana Weeds
The Timber Press Pocket Guide to Palms
Duke's Handbook of Medicinal Plants of the Bible
Woody Plants of the Southeastern United States: a Field Botany Course on CD
Lost Worlds: Highlands of the Guiana Plateau

✱Freelance editing of scientific manuscripts for European, Australian clients and colleagues, 1998-present, approximately 20 edited

✱Articles written for the *Journal of the International Water Lily Society* (Summer 1997 issue) and the *Bulletin of the Australian Carnivorous Plant Society* (Summer 1997; Spring 1999; Winter 1999; Spring 2001; Spring 2002 (2))

✱About 90 papers reviewed for journal including: *Plant Cell Reports*; *Journal of Plant*

Physiology; American Journal of Botany; Plant Science Bulletin; Plant Biology; In Vitro Cell and Developmental Biology: Plant; Journal of the International Carnivorous Plant Society; Pakistan Journal of Biological Sciences; International Journal of Botany; Pakistan Journal of Biological Sciences; Journal of Plant Sciences; Research Journal of Microbiology; Flavour and Fragrance Journal; Annals of Botany; Acta Biologica Cracoviensia; Acta Scientia Horticulturae; Aquatic Botany; Applications in the Plant Sciences; Central European Journal of Biology; New Phytologist; Protoplasma.

- ✳ Literature Review Editor for *Carnivorous Plant Newsletter*, 12/06-12/08.
- ✳ Articles for the *Gale Encyclopedia of Science*, Gayle Research Inc., Detroit: Myrtaceae, Passionflower, Whiskfern, Boarfish, Boxfish, Dory (1994)

Horticultural/Practical Experience with Plants:

- ✳ Created first course on horticulture (B375) at Indiana University Southeast
- ✳ Greenhouse Committee, Biology Department, Indiana University Southeast, 08/2003-present
- ✳ Responsible for organizing Washington College greenhouse; >200% increase in species represented within first 15 months at the College administration of many student volunteers
- ✳ Most of book reviews listed above were written on horticultural subjects
- ✳ Have raised over 100 species of plants, in greenhouse and otherwise, concentrating on fruiting landscape materials for the Southeastern US, tropical fruit, carnivorous plants, and aquatic plants
- ✳ Private, independent study of horticulture, landscaping, and botanical illustration
- ✳ Organized Washington College community in cultivation of giant Amazonian waterlilies (*Victoria amazonica*), Summer 2000
- ✳ Responsible for raising 100-200 plants per year in greenhouse and field at Cornell

Organizational Service:

- ✳ President, International Carnivorous Plant Society, 01/2007-04/2008
- ✳ Executive Board, International Carnivorous Plant Society, 07/2006-04/2008
- ✳ Organizing Committee, 2008 Meeting of the International Carnivorous Plant Society
- ✳ Co-head of Organizing Committee for the 2006 Meeting of the International Carnivorous Plant Society, for which I am also organizing a field trip, symposium, and botanical art workshop; I designed and painted the meeting logo.
- ✳ Seminar Speakers hosted at IUS: Lila Vodkin, University of Illinois; Bob Turgeon, Cornell; University; Steve Clough, University of Illinois; Jeff Maughan, Brigham Young University; Fardad Firooznia, Denison University; Stephen Williams, Lebanon Valley College; Laurent Legendre, Université Jean Monnet; Teresa Fan, University of Louisville; Kornelija Pranjic, University of Vienna, Austria; Peter Morgan, Yale University; Pat Conner, University of Georgia; Scott Bennett, Golden Artist Colors; Bartosz Plachno, Jagiellonian University, Krakow, Poland (2 seminars)
- ✳ ACP Liason for IUS Biology Department, 2007-present
- ✳ IUS Biology External Review Committee, 11/14-08/16
- ✳ Indiana University Southeast UFC Representative, 05/13-10/13

- ✿Indiana University Southeast Natural Sciences representative to ICHE Meeting (Natural Sciences Panel on Common Core) 09-11/12
- ✿ Indiana University Southeast Masters of Liberal Studies Advisory Board, 01/12-06/12, 05/14-05/15
- ✿Indiana University Southeast, Faculty Senate's Nominating Committee, 08/06-05/08
- ✿Indiana University Southeast, Faculty Senate, 08/06-04/12
- ✿Indiana University Southeast, Budgetary Affairs Committee 01/06-08/06
- ✿Indiana University Southeast, Chancellor's Budgetary Advisor Group, 01/06-08/06
- ✿Indiana University Southeast, Student Conference Committee, 09/04-05/09
- ✿Indiana University Southeast, School of Natural Sciences Elections Reform Committee, 03/11-10/11
- ✿Indiana University Southeast, School of Natural Sciences K-12 Outreach Group, 11/04-present
- ✿Indiana University Southeast, School of Natural Sciences Open Day Committee, 11/04-05/05
- ✿Indiana University Southeast, School of Natural Sciences Seminar Series Committee 08/03-present
- ✿Indiana University Southeast, Department of Biology Wildlife Biology Committee 09/13-present
- ✿Indiana University Southeast, Department of Biology Project-Based Learning Committee, 09/13-present
- ✿Indiana University Southeast, Department of Biology Assessment Committee 09/05-06/08, 08/11-08/13, 08/14-present
- ✿Indiana University Southeast, Department of Biology Greenhouse Committee 09/03-present
- ✿Indiana University Southeast, Department of Biology Common Grant Ideas Committee 09/03-present
- ✿IU Southeast Biology Departmental Assessment work with Michelle Zimmermann, 2006-present
- ✿Webmaster and Editor of the Journal, International Triggerplant Society, 01/2003-present
- ✿Organizer for Spring 2002 Merck Grant Speaker, Washington College
- ✿Secretary, Washington College Chapter of Sigma Xi, 04/01-04/02
- ✿Washington College Faculty, Planning Committee, 08/00-08/03
- ✿Washington College Faculty, Curriculum Committee, 08/01-08/03
- ✿Washington College External Review Task Force XI, 08/02-08/03
- ✿Coordinator for the 2000 Summer Undergraduate Research Program at Washington College
- ✿Assisted in the organization of the Washington College delegation to the 2000 Centennial Conference Student Research Colloquium
- ✿In charge of preparation for nine sections of General Biology taught by five different instructors, Fall 2000, 2001
- ✿Washington College Campus Representative for the Botanical Society of America
- ✿Washington College--coordinate discussion of issues involving Litrenta Lecture Hall, 09/00-05/03
- ✿One of three authors of Washington College's successful application for a Sigma Xi

chapter

- ✿ Co-organizer of Cooperative State Research Extension and Education Service session for postdoctoral and other research associates, 1998 review, Department of Crop Sciences, University of Illinois

Other Relevant Experience

- ✿ Seaweed and teasel field work and cultivation 2014-present
- ✿ Five trips to Australia (1998-2002) for botanizing, picture taking for books on carnivorous plants and triggerplants
- ✿ Judge for 2004, 2005 Regional Science Olympiad held at Indiana University Southeast, Science of Fitness, B and C; assisted in 2006, 2007, 2008 with event preparation
- ✿ Judge for 2004, 2006 Louisville Regional Science Fair (botany; head judge for 2006)
- ✿ Judge for 2005, 2006, 2007, 2008 Indiana University Southeast Student Research Conference
- ✿ Session moderator for the 2007 Indiana University Undergraduate Research Conference
- ✿ Volunteer for Cornell Alumni Career Link
- ✿ January 2003 Presentation on carnivorous plants for local church youth group (ages 3-12), Corydon, IN
- ✿ October 2003, 2004 Presentation on carnivorous plants for 75 visiting middle school students
- ✿ August 2002 Presentation on plants' pigments and carnivorous plants for Cape Henlopen (DE) State Park Young Naturalists (12-14 years old)
- ✿ August 2002 Library display on triggerplants and carnivorous plants
- ✿ March 2002 Presentation on edible plants for Chestertown Boy Scout Troop
- ✿ June 2001 Presentation on carnivorous plants for local church summer camp (ages 6-12)
- ✿ June 2001 Presentation on carnivorous plants for students from the Johns Hopkins Center for Talented Youth attending a program at Washington College
- ✿ May 2001, Led Odyssey Tour of Longwood Gardens for alumni of Washington College
- ✿ 1994-1996 Assisted with instruction/supervision of undergraduates performing independent research and undergraduates working in the Cornell COSEP program for minorities
- ✿ Volunteer for departmental outreach activities: Agronomy Day--tour guide, University of Illinois
- ✿ University of Illinois Agronomy Open House—greeter
- ✿ Assisted with instruction of undergraduates performing laboratory work and independent research at the University of Illinois
- ✿ June 1992, Session on plants for ages 3-12, Children of Yale program, Association of Yale Alumni

Societies include:

Basic: American Fern Society, International Carnivorous Plant Society*, International Triggerplant Society*

Applied: California Rare Fruit Growers